Ideal Cooperage
Jersey City, New Jersey

The Ideal Cooperage site is an inactive, 3 acre drum reconditioning facility situated in the northeast corner of Jersey City, New Jersey. The site is located between a residential neighborhood and an industrial area. Approximately 3000 drums, mostly empty, have been stored at the site. Ample evidence of spillage of residual chemicals from some of the drums has been documented. Some of these chemicals are considered hazardous and include among others: PCB's, flourathene, isophorone, pyrene, and heavy metals such as chromium, lead and cadmium. The site is partially fenced, although access by children has been documented. In addition, several fires have occurred causing considerable on-site property damage. Leachate from the site has contaminated a small adjacent stream which discharges into a storm sewer and ultimately to the Hudson River.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: The purpose of these records is to provide a convenient way to prepare an auditable record of the data and documentation used to apply the Hazard Ranking System to a given facility. As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference that will make the document used for a given data point easier to find. Include the location of the document and consider appending a copy of the relevant page(s) for ease in review.

FACILITY NAME: Ideal Cooperage

LOCATION: Jersey City, New Jersey

Peter M. Cannelongo

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):
No groundwater samples taken

Rationale for attributing the contaminants to the facility:
N/A

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern: Site elevation is 10-15' (located near sealevel) ∴ aquifer of concern would be close to surface, ≤20' see item No.1 of Bibliography

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:
water level is close to surface. Occaisionally, Floodi occurs due to low elevation NO. 2 bibliography

Depth from the ground surface to the lowest point of waste disposal/ storage: 0' storage and disposal is on surface
See No. 2 of Bibliography

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

44" as per Mitre Manual

Mean annual lake or seasonal evaporation (list months for seasonal):

32"

Net precipitation (subtract the above figures):

12"

Permeability of Unsaturated Zone

Soil type in unsaturated zone: the area of the site has been extensively worked. Original soil conditions have probably been disturbed greatly. See item No. 2

Permeability associated with soil type: Visual observations by this writer have indicated several large ponds on site. This would suggest moderately impermeable topsoil. See item No. 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases): Liquid — oil, tar-like substances

See item No. 2

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

No containment Ref #2

Method with highest score: piles uncovered, waste unstabilized, and no liner - score 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated: many found, see item No. 2
PCB, isophorone, flouranthene, naphthalene, benzopyrene, pyrene, phenanthrene, chromium, cadmium, lead, arsenic, etc. see item no. 2

Compound with highest score:

PCB

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

3000 drums were estimated to be on-site by EPA. However nearly all were said to be empty except for residue. Observations by this writer confirms this. (see item no. 2); Thus total waste quantity is unknown

Basis of estimating and/or computing waste quantity:

Observations by several including this writer have documented spilled residue and powders and granulated solids. As a conservative estimate, this quantity taken together would total 15-20 cu yds.

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:
none known (this is a very developed area) other than industrial.

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:
4200' Public Service Corp. well located SW of site
See item no. 3

Distance to above well or building: 4200'

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:
none for drinking could be found

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre): none

Total population served by ground water within a 3-mile radius: none

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum): 27 organics and 24 inorganics including those listed under groundwater, see item 2

Rationale for attributing the contaminants to the facility:
See Item 2: Samples taken from an adjacent stream: Downstream samples show increases in levels of contaminants over upstream sample. Also observation of this writer indicated oil-like material seeping into stream from stream bank which is part of site.

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Name/description of nearest downslope surface water:

Average slope of terrain between facility and above-cited surface water body in percent:

Is the facility located either totally or partially in surface water?

Is the facility completely surrounded by areas of higher elevation?

1-Year 24-Hour Rainfall in Inches

Distance to Nearest Downslope Surface Water

Physical State of Waste

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Method with highest score:

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated: Those listed on page 4 and others, see item 2

Compound with highest score: PCB

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum): See p. 4

Basis of estimating and/or computing waste quantity:

See p. 4

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance: Hudson River – Recreation

Is there tidal influence? yes

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

none known

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

none known

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less: none known

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

None

Contaminated surface flows to city storm sewer then to Hudson River. See item 2

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre): N/A

Total population served: 0

Name/description of nearest of above water bodies: Hudson River

Distance to above-cited intakes, measured in stream miles. None

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected: see item 4

a non-methane contaminant, not identified
sustained reading

Date and location of detection of contaminants

OVA survey by FIT 8/3/82 see item 4

Methods used to detect the contaminants:

OVA survey mode at breathing level

Rationale for attributing the contaminants to the site:

immediately Downwind of site see item 4
In addition, odors were detected by on-site FIT personnel during earlier sampling surveys see item 2

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound: 0 rating

Most incompatible pair of compounds: 0 rating

Toxicity

Most toxic compound: PCB

Hazardous Waste Quantity

Total quantity of hazardous waste: see p. 4

Basis of estimating and/or computing waste quantity:

See p. 4

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi (0 to 1/2 mi) 0 to 1/4 mi

>19,000 people Based on Field observations

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

None

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

None

Distance to critical habitat of an endangered species, if 1 mile or less:

None

Land Use

Distance to commercial/industrial area, if 1 mile or less:

adjacent

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less: none

Distance to residential area, if 2 miles or less:

adjacent

Distance to agricultural land in production within past 5 years, if 1 mile or less:

none

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

none

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

no

Ideal Coopers

BIBLIOGRAPHY OF INFORMATION SOURCES USED TO

APPLY THE HAZARD RANKING SYSTEM*

	TITLE	DATE	AUTHOR/PUBLISHER	AVAILABLE FROM
1.	US Topographic Map Jersey City, NJ. Quadrangle	1967	Geological Survey copy given in Item 2	
2.	HAZARDOUS WASTE SITE Inspection, Ideal Cooperage (Final Report)	10/27/81	Peter Cangialosi FIT-Newark	FIT-Newark
3.	Locations of Wells in Jersey City	5/19/82	Compiled by Amelia Jersey	FIT-Newark
4.	Field Notes, OVA SURVEY	8/3/82	P. Cangialosi	FIT-Newark
5.				
6.				
7.				
8.				
9.				
10.				

*Attach additional pages, if necessary.

TDD No. _____

Document No. _____

Date: 9/30/80

Site: Ideal Coperage Location: Jersey City N.J.

Low Priority Factors	High Priority Factors
1) Possible ground water contamination 2) Possible runoff of excess waste water from drum cleaning could end up in the Hudson River via a storm drain. 3) Possibility of a fire if some of the reactive residuals in the drums (acetic anhydride) have a chance to react.	

Recommended Priority: This is considered a low to medium site.

Recommended Action:

HAZARDOUS WASTE SITE INVESTIGATION
Ideal Cooperage
Jersey City, New Jersey

TDD No. 02-8104-06

October 27, 1981

Participating Personnel:

Fred C. Hart Associates, Inc.,

Peter Cangialosi, Sr. Environmental Engr
James Shirk, Sr. Environmental Engr.
James Rogers, Sr. Chemical Engr
Michael Rosenberg, Sr. Environmental Engr.
Steven Gelb, Hydrogeologist
Frances Barker, Biochemist

Ideal Cooperage

John Monck, Owner/Operator

Report Prepared by:

Peter M. Cangialosi
Sr. Environmental Engineer

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Peter M. Cangialosi
Sr. Environmental Engr.
October 27, 1981

BACKGROUND

On May 5, 1981 the Fred C. Hart Associates Field Investigation Team (FIT) was requested to perform a preliminary inspection and sampling survey at the Ideal Cooperage site in Jersey City, New Jersey. In addition, FIT was to determine the outfall of a stream adjacent to the east side of the site which was suspected of being contaminated. On May 12, 1981 FIT conducted a preliminary survey at the site. On July 16, 1981 a sampling survey was conducted in which soil and water samples were taken in order to characterize site conditions. On the same date, a search was undertaken to locate the eventual outfall of the above-mentioned east stream.

DESCRIPTION OF THE SITE

The site, an inactive drum reconditioning facility lies directly west of a double set of Conrail tracks and directly north of an Erie-Lackawanna RR track. The site location is shown in Figure 1 and a site sketch map is provided in Figure 2. The property is bisected by New York Avenue with the southern section being the area of most concern. It is in this section that storage and reconditioning of barrels took place. The main reconditioning building was gutted by fire approximately 4 years ago. Subsequent fires have caused considerable damage to other smaller buildings and equipment including two trailer vans. Approximately 3000 mostly empty drums, had been stored at the site. The drums were both stacked and strewn over the entire site.

Ample evidence of spillage of residual chemicals from some of the drums has been documented by FIT. Generally, the site is in a deteriorating state and is not secure. On at least two occasions children have been witnessed by FIT or other government agents walking through the site. A more detailed site description is given in the Appendix in a memo dated July 20, 1981 from this writer to Mr. Wayne Pierre.

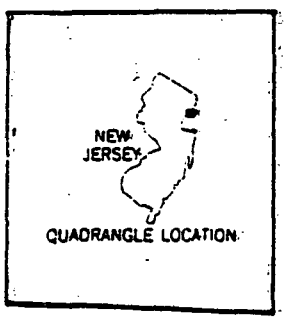


Figure 1
Ideal Cooperage

Fred C. Hart Assoc., Inc.
Peter M. Cangialosi 10/27/81

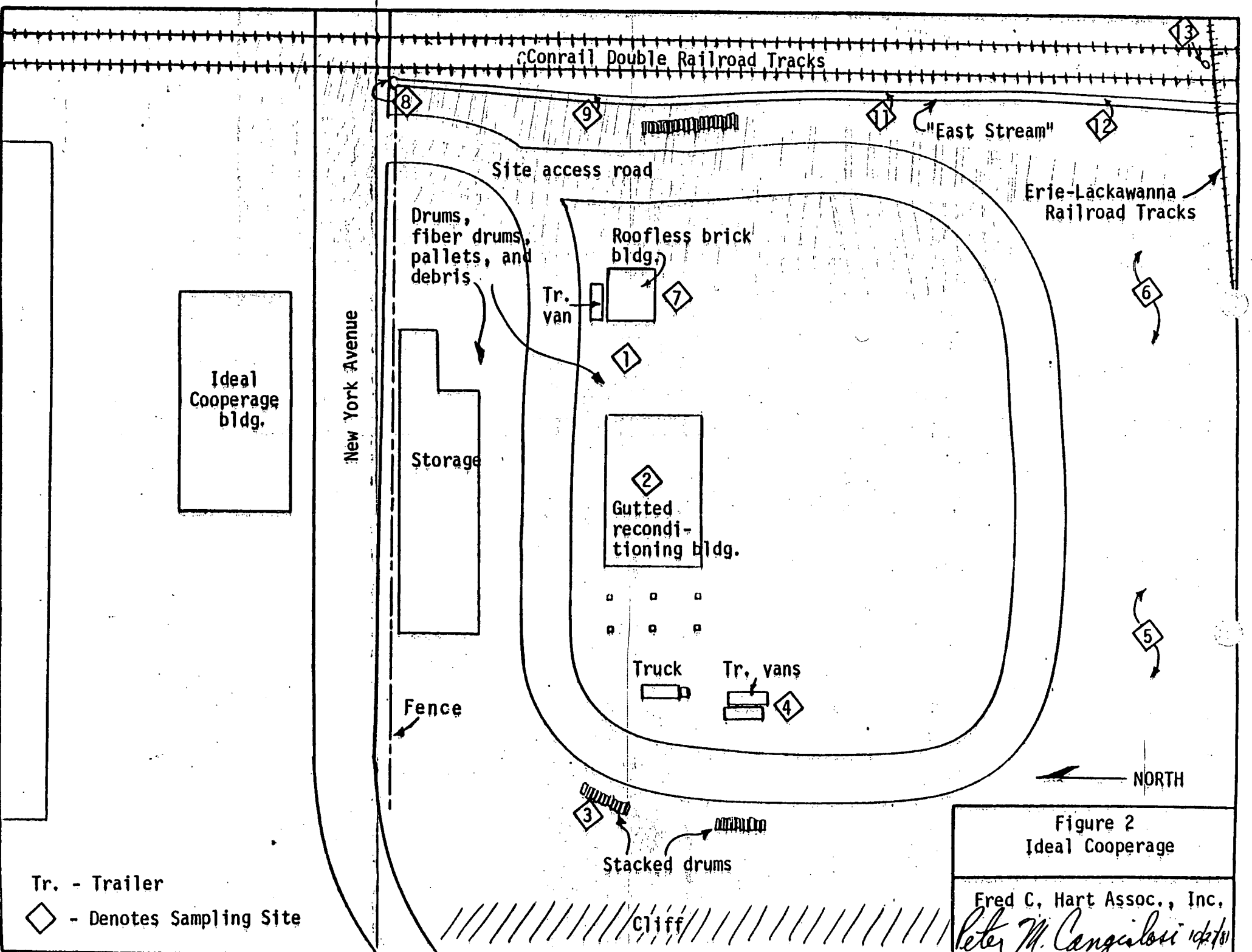


Figure 2
Ideal Cooperage

Fred C. Hart Assoc., Inc.
Peter M. Cangialosi 12/7/81

DESCRIPTION OF THE SURROUNDING AREA

As shown in Figure 1 the site is located at the base of a 90 foot tall cliff which separates a residential neighborhood in Jersey City from a heavily industrial and residential area to the east of Jersey City and Hoboken. New York Avenue connects the two areas. The lower industrial area which Ideal Cooperage is adjacent to, includes the passenger terminal of the Erie-Lackawanna Railroad and Conrail's repair and freight yards along the Hudson River. The western terminal of the Holland Tunnel and heavily traveled Routes 1&9 are also located less than a mile away.

SAMPLING CONDITIONS

Sampling by FIT was conducted on July 16, 1981. The temperature at the time was 80-85°F and the weather was fair. Soil samples were sent to Rocky Mountain Analytical Laboratory for inorganic analysis, water samples were sent to Versar for inorganic analysis, and Mead Technology Labs performed all organic analyses. Soil samples were composites of soil or solid surface material (0-3 inches in depth) from 3-5 points in the same immediate vicinity. Sample locations are described in Table 1 and shown in Figure 2. Analytical results are given in Table 2.

DISCUSSION OF ANALYTICAL RESULTS

A review of the analytical data indicates that a wide variety of contaminants are present at the site. Migration of some of these contaminants off-site via the east stream has also been established. Elevated levels of polyaromatic hydrocarbons, most notably: fluoranthene-1300 ug/g, naphthalene-1000 ug/g, benzopyrene-520 ug/g, anthracene-2400 ug/g, flourene-2000 ug/g, isophorone-5600 ug/g, phenanthrene-2400 ug/g, and pyrene-1200 ug/g were found in composite soil samples predominantly from the western and southern portions of the property (sites 3,4,5 and 6). High levels of PCB's-28 ug/g, phenol-110 ug/g, 1,1,1-trichloroethane-130 ug/g, and toluene-270 ug/g were also found in the same general area. In addition, inorganic analysis indicated high levels of

chromium-1800 mg/kg, cadmium-48 mg/kg, lead-2700 mg/kg, and arsenic-92 mg/kg among others in composite soil samples over much of the site. Smaller concentrations of many other compounds were found throughout the site. This wide variety of compounds is to be expected since a large quantity of barrels, some of which still contained residual chemicals were processed at the site. From observations of the present condition of the site, it would be reasonable to conclude that waste management practices were deficient during the facility's operations. In fact, it was clearly evident that between the May 5 inspection and the July 16 sampling survey that an inadequate attempt was made by the company to improve the southern portion (sites 5 and 6) by simply bulldozing the area. At this time it is not known whether the drums originally in this area were removed or buried. A metal detection instrument employed during the July 16 survey gave inconclusive results concerning the presence of buried drums in this area. However, it was obvious that spillage originally in the area was not removed prior to bulldozing since many spots of different color solids and soils were still clearly apparent.

During both surveys at the site, visual imspections indicated that the east stream deteriorated markedly from its source, the two pipes near New York Avenue, past the site to where it flowed under the tracks downstream of the site. On-site observations by FIT personnel indicated that oily patches (some heavy), surface scums, high turbidity, and yellow sludge were present in the stream but absent immediately above the site. At two points, oil seeping into the stream from the Ideal Cooperage stream bank were documented.

In addition to visual observations, analytical results of the five stream samples also show contamination of the stream by the site. Of the twenty-nine organics found in the stream samples, only two showed higher values upstream of the site (chloroform and tetrachloroethylene). All others were much greater downstream indicating that off-site migration is occurring. Of the twenty-four inorganics found in the downstream samples all were found in much greater or equal concentrations to those in the upstream sample. Again this indicates off-site migration to the stream. Of particular concern is sample No. B0612 taken at one of the oil seeps to the stream. This sample showned a PCB value of 234.5 ug/l. This value strongly suggests that PCB contaminated oil is present at the site and presents a health threat since it is uncontained and is already leaving the site.

Table 1

IDEAL COOPERAGE

SAMPLING SURVEY OF JULY 16, 1981

BY FCHA FIELD INVESTIGATION TEAM

SITE NO.	SAMPLE NOS.	SAMPLE DESCRIPTION
1	MB 8186 B 0601	Soil composite of 3 pts immediately east and north of gutted building. 2 pts were black and sludge-like, 3rd point was drier and of varying color.
2	MB 8187 B 0602	Soil composite of 3 pts along water line of pond within gutted building. Sample was very muddy and black.
3	MB 8188 B 0603	Soil composite of 5 pts adjacent to west of line of stacked drums near cliff. Description of 5 pts: a) orange solids b) black and muddy, c) rust colored solids, d) brown and viscous, e)soil.
4	MB 8189 B 0604	Soil composite of 4 pts directly south of 2 side-by-side trailer vans. Dry soil and solids of varying colors.
5	MB 8190 B 0605	Soil composite of 4 pts in southwest corner of site. Many different colors and consistencies.
6	MB 8191 B 0606	Soil composite of 3 pts in southeast corner of site adjacent to site #5. Many different colors and consistencies.
7	MB 8192 B 0607	Soil composite of 4 pts immediately south of roofless brick building. Mostly brown soils.
8	MB 8194 B 0608	Clear water sample from double 4" pipes near railroad crossing sign at New York Ave. and railroad tracks.
9	MB 8195 B 0609	Water sample 15' downstream of 3' concrete pipe in stream water. Water was fairly clear but had a scum layer and small oil patches on surface.

Table 1 (Cont'd)

SITE NO.	SAMPLE NOS.	SAMPLE DESCRIPTION
I1	MB 8197 B 0611	Water sample from stream 100' north of Erie-Lackawanna track 20' north of oil seep. Stream is clear but surface scum is present (both oil and biota).
I2	MB 8198 B 0612	Water sample from stream 30 yards north of Erie-Lackawanna railroad bridge adjacent to oil seep.
I3	MB 8199 B 0613	Offsite running water. Appears similar to stream water between 2 sets of railroad track.

DYE TEST RESULTS

In addition to performing a sampling survey, TDD 02-8104-06 also requested FIT to determine the final outfall of the contaminated stream. The east stream extends beyond the Erie-Lackawanna Railroad overpass but has no discernible outlet. A dye test performed on August 18, 1981 substantiated that the stream flows under the western most track of the double tracks, then flows south between the tracks and surfaces in a small depression under the overpass. The dye was not detected beyond this point. Later consultations with the Jersey City Engineering Department and Conrail verified that drainage from the depression continues between the tracks for approximately 500 feet to a storm sewer at Hoboken Avenue. The sewer then continues east on Hoboken Avenue and turns south onto Jersey Avenue and ultimately to the Hudson River just upstream of the Holland Tunnel. The approximate length of the sewer is 1.2 miles. During discussions with Mr. Neil Ferrone, the Conrail track supervisor in this area, he related that personnel under his direction occasionally were required to unplug the drainage between the tracks. During this work it is highly probable that these men would come in direct contact with the contaminated water. Mr. Ferrone was subsequently warned of this danger.

STATUS OF LOCAL AND STATE INVOLVEMENT

In Court Docket No. I-231, the Municipal Court of Jersey City has ordered that Ideal Cooperage freeze all of its operations associated with hazardous materials. In addition, recommendations are presently being made to the Judge presiding over the case to have the property fenced and posted and to order additional water, soil, and air sampling. There have been no actions taken by the state at this time.

RECOMMENDATIONS

It is recommended that:

1. Soil sampling be conducted at the upper (western) portion of the site above the cliff and the northern portion of the site, north of New York Avenue.

2. Enforcement action be considered by EPA based on the findings of this report.

It is also recommended that access to the site be immediately restricted. Consideration should also be given to cleaning up and containing the contaminants in the east stream.

BASE NEUTRAL EXTRACTABLES	SAMPLE NUMBER B0601 ug/g	B0602 ug/g	B0603 ug/g	B0604 ug/g	B0605 ug/g	B0606 ug/g	B0607 ug/g
Acenaphthene			1200				
1,2,4-Trichlorobenzene				60			
Hexachlorobenzene				3.0			
Hexachloroethane							
Bis (2-chloroethyl)ether							
2-Chloronaphthalene							
1,2-Dichlorobenzene							
1,2-Dichlorobenzene							
1,4-Dichlorobenzene							
3,3-Dichlorobenzidine							
2,4-Dinitrotoluene							
2,6-Dinitrotoluene							
1,2-Diphenylhydrazine							
Fluoranthene			1300				
4-chlorophenyl phenyl ether							.42
4-Bromophenyl phenyl ether							.20
Bis (2-chloroisopropyl) ether							
Bis (2-chloroethoxy)methane							
Hexachlorobutadiene							
Hexachlorocyclopentadiene							
Isophorone					5600	4600	
Naphthalene			1000	4.8	500	720	
Nitrobenzene				130			
N-nitrosodimethylamine							
N-nitrosodiphenylamine							
N-nitrosodi-n-propylamine							
Bis(2-ethylhexyl) phthalate	18	14	140	160	1000	160	1.25
Butyl benzyl phthalate	10k		75	11	53		.20
Di-n-butyl phthalate				9.1	35	10k	
Di-n-octyl phthalate				10	21		
Diethylphthalate				.2k			
Dimethylphthalate				6.3			
Benzo(a)anthracene (1,2-benzanthracene)			270				
Benzo(a) pyrene			520				
Benzo(b) fluoranthene				.5k			
Benzo(k) fluoranthene			540	.2k			
Chrysene			270				
Acenaphthylene							.54
Anthracene			2400	.2k			.58
Benzo(ghi) perylene (1,12-Benzoperyene)							

Blank spaces indicate that the chemical was not detected

k - actual value, within the limits of this method, is less than the value given

	SAMPLE NUMBER						
	B0601 ug/g	B0602 ug/g	B0603 ug/g	B0604 ug/g	B0605 ug/g	B0606 ug/g	B0607 ug/g
Fluorene			2000	.2k			.43
Phenanthrene			2400	.5k			.58
Dibenzo(a,h) anthracene (1,2,5,6-dibenzanthracene)							
Indeno (k,2,3-cd) pyrene							
2,3,7,8-tetrachlorodibenzo p-dioxin (TCDD)							
Benzidine							
Pyrene			1200				

ACID COMPOUNDS

2,4,6-trichlorophenol							
p-chloro-m-cresol							
2-chlorophenol							
2,4-dichlorophenol							
2,4-dimethylphenol							
2-nitrophenol							
4-nitrophenol							
2,4-dinitrophenol							
4,6-dinitro-o-cresol							
pentachlorophenol				3.1			
phenol						110	

PESTICIDES

aldrin							
dieldrin	.5			2.2			.06
chlordane							
4,4' -DDT							.03
4,4' -DDE							
4,4' -DDD							
Alpha -endosulfan							
Beta -endosulfan							
endosulfan sulfate							
endrin							
endrin aldehyde							
heptachlor							
heptachlor epoxide							
Alpha -BHC							
Beta -BHC							
Gama -BHC							
Delta -BHC							
PCB-1242	2.8[0]		5.0[0]	28.0[0]	5.6[0]		
PCB-1254	2.8[0]		5.0[0]	28.0[0]	5.6[0]		
PCB-1221	2.8[0]		5.0[0]	28.0[0]	5.6[0]		
PCB-1232	2.8[0]		5.0[0]	28.0[0]	5.6[0]		
PCB-1248	2.8[0]		5.0[0]	28.0[0]	5.6[0]		
PCB-1260	2.8[0]		5.0[0]	28.0[0]	5.6[0]		
PCB-1016	2.8[0]		5.0[0]	28.0[0]	5.6[0]		

Blank spaces indicate that the chemical was not detected.

Additional comments for this page are on next page.

	SAMPLE NUMBER						
	B0601 ug/g	B0602 ug/g	B0603 ug/g	B0604 ug/g	B0605 ug/g	B0606 ug/g	B0607 ug/g
toxaphene*							
Mirex							

VOLATILES

Benzene				.01k			
Carbon Tetrachloride							
Chlorobenzene				.05			
1,2-Dichloroethane					12.0	130	
1,1,1-Trichloroethane							
1,1-Dichloroethane							
1,1,2-Trichloroethane							
1,1,2,2-Tetrachloroethane							
Chloroethane							
Bis (chloromethyl)ether							
2-Chloroethyl vinyl ether (mixed)							
Chloroform						1k	
1,1-dichloroethylene						46	
1,2-trans-Dichloroethylene							
1,2-dichloropropane							
1,3-Dichloropropylene (1,3-Dichloropropene)							
Ethylbenzene	1k		2.4	.86	11.0	21	
Methylene Chloride (Dichloromethane)			1.0	.02[c]	4.0	4.9	.02
Methyl Chloride (Chloromethane)		1.9					
Methyl bromide (Chloromethane)							
Bromoform (Tribromomethane)							
Bromodichloromethane							
Trichlorofluoromethane					7.6	57	
Dichlorodifluoromethane							
Dibromochloromethane							
Tetrachloroethylene				.01			
Toluene	1.2		2.6	.42	89.0	270	
Trichloroethylene				.02		1k	
Vinyl chloride							
Acrolein							
Acrylonitrile							

Blank spaces indicate that the chemical was not detected.
k - Actual value, within the limits of this method, is less than the value given
* - Less than 10 ug/l

Comments for preceding page:

k - Actual value, within the limits of this method, is less than the value given.
o - Sample contains a mixture of PCB's. Identification of the exact PCB's comprising this mixture is not possible. The conc. of PCB's in the sample has been estimated using those peaks common to 1016 and 1260.

BASE NEUTRAL EXTRACTABLES	SAMPLE NUMBER B0608 ug/l	B0609 ug/l	B0611 ug/l	B0612 ug/l	B0613 ug/l		
Acenaphthene		17					
1,2,4-Trichlorobenzene							
Hexachlorobenzene							
Hexachloroethane							
Bis (2-chloroethyl)ether							
2-Chloronaphthalene							
1,2-Dichlorobenzene							
1,2-Dichlorobenzene							
1,4-Dichlorobenzene							
3,3-Dichlorobenzidine							
2,4-Dinitrotoluene							
2,6-Dinitrotoluene							
1,2-Diphenylhydrazine							
Fluoranthene		51	*	20			
4-chlorophenyl phenyl ether							
4-Bromophenyl phenyl ether							
Bis (2-chloroisopropyl) ether							
Bis (2-chloroethoxy)methane							
Hexachlorobutadiene							
Hexachlorocyclopentadiene							
Isophorone							
Naphthalene							
Nitrobenzene							
N-nitrosodimethylamine							
N-nitrosodiphenylamine							
N-nitrosodi-n-propylamine							
Bis(2-ethylhexyl) phthalate		110	350		12		
Butyl benzyl phthalate		43	*	130			
Di-n-butyl phthalate			*	110			
Di-n-octyl phthalate				10			
Diethylphthalate							
Dimethylphthalate							
Benzo(a)anthracene (1,2-benzanthracene)		43	*	11			
Benzo(a) pyrene		21					
Benzo(b) fluoranthene							
Benzo(k) fluoranthene		21					
Chrysene		43	*	11			
Acenaphthylene							
Anthracene		210	*	24			
Benzo(ghi) perylene (1,12-Benzoperyene)							

Blank spaces indicate that the chemical was not detected

* Less than 10 ug/l

SAMPLE NUMBER

	B06081 ug/l	B06091 ug/l		B06111 ug/l	B0612 ug/l	B0613 ug/l		
Fluorene		54						
Phenanthrene		210		*	24			
Dibenzo(a,h) anthracene (1,2,5,6-dibenzanthracene)								
Indeno (k,2,3-cd) pyrene								
2,3,7,8-tetrachlorodibenzo p-dioxin (TCDD)								
Benzidine								
Pyrene		89		*	17			

ACID COMPOUNDS

2,4,6-trichlorophenol								
p-chloro-m-cresol								
2-chlorophenol								
2,4-dichlorophenol								
2,4-dimethylphenol								
2-nitrophenol								
4-nitrophenol								
2,4-dinitrophenol								
4,6-dinitro-o-cresol								
pentachlorophenol								
phenol					*			

PESTICIDES

aldrin								
dieldrin								
chlordane								
4,4' -DDT								
4,4' -DDE								
4,4' -DDD								
Alpha -endosulfan								
Beta -endosulfan								
endosulfan sulfate								
endrin								
endrin aldehyde								
heptachlor								
heptachlor epoxide								
Alpha -BHC								
Beta -BHC								
Gama -BHC								
Delta -BHC								
PCB-1242								
PCB-1254								
PCB-1221								
PCB-1232								
PCB-1248					234.5**			
PCB-1260								
PCB-1016								

Blank spaces indicate that the chemical was not detected.
* -Less than 10 ug/l
**Presence of PCB confirmed by GC/MS

SAMPLE NUMBER

	B0608 ug/l	B0609 ug/l	B0611 ug/l	B0612 ug/l	B0613 ug/l	
toxaphene*						
Mirex						

VOLATILES

Benzene			*			
Carbon Tetrachloride						
Chlorobenzene						
1,2-Dichloroethane						
1,1,1-Trichloroethane			37	38	21	
1,1-Dichloroethane			38	38	30	
1,1,2-Trichloroethane						
1,1,2,2-Tetrachloroethane						
Chloroethane			*	*		
Bis (chloromethyl)ether						
2-Chloroethyl vinyl ether (mixed)						
Chloroform	33	16	12	12	*	
1,1-dichloroethylene						
1,2-trans-Dichloroethylene	*	180	280	220	100	
1,2-dichloropropane						
1,3-Dichloropropylene (1,3-Dichloropropene)						
Ethylbenzene			*	*		
Methylene Chloride (Dichloromethane)				*	*	
Methyl Chloride (Chloromethane)						
Methyl bromide (Chloromethane)						
Bromoform (Tribromomethane)						
Bromodichloromethane		*				
Trichlorofluoromethane						
Dichlorodifluoromethane						
Dibromochloromethane						
Tetrachloroethylene	26	12	*	14		
Toluene			160	60		
Trichloroethylene	*	*	*	*		
Vinyl chloride		52	100	63	30	
Acrolein						
Acrylonitrile						

Blank spaces indicate that the chemical was not detected.

* - Less than 10 ug/l

TABLE 2 (Cont'd)

	SAMPLE NUMBER					
	B0608 ug/l	B0609 ug/l	B0611 ug/l	B0612 ug/l	B0613 ug/l	
toxaphene*						
Mirex						

VOLATILES

Benzene			*			
Carbon Tetrachloride						
Chlorobenzene						
1,2-Dichloroethane						
1,1,1-Trichloroethane			37	38	21	
1,1-Dichloroethane			38	38	30	
1,1,2-Trichloroethane						
1,1,2,2-Tetrachloroethane						
Chloroethane			*	*		
Bis (chloromethyl)ether						
2-Chloroethyl vinyl ether (mixed)						
Chloroform	33	16	12	12	*	
1,1-dichloroethylene						
1,2-trans-Dichloroethylene	*	180	280	220	100	
1,2-dichloropropane						
1,3-Dichloropropylene (1,3-Dichloropropene)						
Ethylbenzene			*	*		
Methylene Chloride (Dichloromethane)				*	*	
Methyl Chloride (Chloromethane)						
Methyl bromide (Chloromethane)						
Bromoform (Tribromomethane)						
Bromodichloromethane		*				
Trichlorofluoromethane						
Dichlorodifluoromethane						
Dibromochloromethane						
Tetrachloroethylene	26	12	*	14		
Toluene			160	60		
Trichloroethylene	*	*	*	*		
Vinyl chloride		52	100	63	30	
Acrolein						
Acrylonitrile						

Blank spaces indicate that the chemical was not detected.

* - Less than 10 ug/l

SAMPLE NUMBER

INORGANICS	MB8186 mg/kg	MB8187 mg/kg	MB8188 mg/kg	MB8189 mg/kg	MB8190 mg/kg	MB8191 mg/kg	MB8192 mg/kg
Aluminum	6,000	3,000	360	2,200	2,100	330	9,000
Chromium	1,800	90	170	290	82	91	200
Barium	130	150		100	170	32	180
Beryllium							
Cadmium	21	6.9	4.8	17	34	48	1.8
Cobalt	66	37		25	16		150
Copper	39	12	11	270	62	90	9
Iron	8,900	10,000	980	2,200	960	420	10,000
Lead	170	320	2,700	1,600	620	1,300	60
Nickel	220	23		70	26		340
Manganese	200	420	21	120	180	34	190
Zinc	440	1600	5,500	3,200	390	220	260
Boron		12		15			
Vanadium	600	18		100			230
Calcium	7,000	11,000	2,100	6,500	7,500	600	18,000
Magnesium	10,000	2,400	160	2,000	1,100	120	26,000
Sodium	300	650	450	850	700	500	650
Arsenic	5.6	3.7	11	92	2.4		64
Antimony			2.3	6.6	7.3		
Selenium							
Thallium	1.4						1.2
Mercury							
Tin	230	78	240	86	67	17	85
Silver							
Ammonia							
Fluoride							
Sulfide							
Cyanide							
pH							
TOC							

Blank spaces indicate that the chemical was not included in the analysis.

SAMPLE NUMBER

INORGANICS	MB8194	MB8195	MB8197	MB8198	MB8199			
	µg/l	µg/l	µg/l	µg/l	µg/l			
Aluminum	400	6,050	2150	1400	200			
Chromium	10	50	<10	70	<10			
Barium	20	290	170	180	90			
Beryllium	<2	<2	<2	<2	<2			
Cadmium	<5	<5	<5	5	<5			
Cobalt	<10	<10	<10	<10	<10			
Copper	<20	140	60	60	20			
Iron	100	22,060	11,400	20,900	3,300			
Lead	<40	400	160	160	<40			
Nickel	<20	20	<20	<20	<20			
Manganese	20	220	170	280	170			
Zinc	<10	560	220	180	30			
Boron	30	70	130	130	250			
Vanadium	<10	30	10	20	<10			
Calcium	15,700	25,300	32,200	34,900	47,900			
Magnesium	4,800	9,500	10,900	11,100	11,600			
Sodium	12,600	19,800	27,800	28,700	34,500			
Arsenic	<10	50	30	100	<10			
Antimony	<20[e]	<20	<20	<20	<20			
Selenium	<10	<10	<10	<10	<10			
Thallium	<10	<10	<10	<10	<10			
Mercury	<1	1	<1	<1	<1			
Tin	20	20	<20	170[b]	<40[a]			
Silver	<20	<20	<20	<20	<20			
Ammonia								
Fluoride								
Sulfide								
Cyanide								
pH								
TOC								

Blank spaces indicate that the chemical was not included in the analysis.

a) with a detection limit of 20
b) with a detection limit of 40
e) average of two replicate determinations

APPENDIX

FRED C. HART ASSOCIATES, INC.

155 WASHINGTON STREET, NEWARK, NEW JERSEY 07102 TELEPHONE (201) 621-6800

MEMORANDUM

TO: Wayne Pierre
Water Division, Solid Waste Branch, NYC

FROM: Pete Cangialosi, FCHA-Newark PC

RE: Sampling at Ideal Cooperage, Jersey City

DATE: July 20, 1981

On Thursday July 16, 1981 several members of the Newark FIT staff, including myself conducted a sampling survey at Ideal Cooperage in Jersey City, N.J. We met Mr. John Monck, the owner who let us on the property but did not accompany us during sampling. The condition of the property was considerably different from that of our preliminary inspection on May 12, 1981. During the first inspection the property was heavily flooded due to heavy precipitation and runoff from higher ground immediately to the west of the property. Some of the water was discolored from chemicals which had been spilled on the ground. Many drums were strewn over most of the site, nearly all without tops. Some contained various chemical residues, although most were completely empty. The former barrel reconditioning building was gutted with most of the exterior walls gone. The interior of the building was also flooded but no drums were present. Around the site were several other small buildings and large trailer vans. These were all in very bad shape and all were gutted by fire. One van contained drums, one of which had tipped and spilled a yellow granular solid. Directly east of the site was a small stream which flowed between the property line and the double set of railroad tracks. Much of the water in this stream originated from two side-by-side four inch pipes at the northeast corner of the Ideal Cooperage property. Mr. Monck explained that this water was flowing from a broken Jersey City potable water pipeline located above on New York Avenue. Further downstream there were small patches of oil but the water did not otherwise appear severely polluted.

During our sampling survey of July 16, it was clearly evident that an attempt had been made to improve the appearance of portions of the property. The property was much drier with the only wet areas being the ponded water still remaining in the former reconditioning building and a muddy area adjacent to the east side of the same building. The southern half and eastern edge of the property had been bulldozed within the previous week. No drums were seen in the southern half although many patches of different colored soil and powder and granulated solids were noted over the entire section. Similar colored patches were also seen on the eastern edge along with several ruptured barrels which had spilled their unknown contents. One appeared to be tar although it was quite hard despite the warm weather. On the western side many barrels were stacked on their sides in two groups. Again various colored patches of soil and solids of different consistences were found around these barrels on the ground.

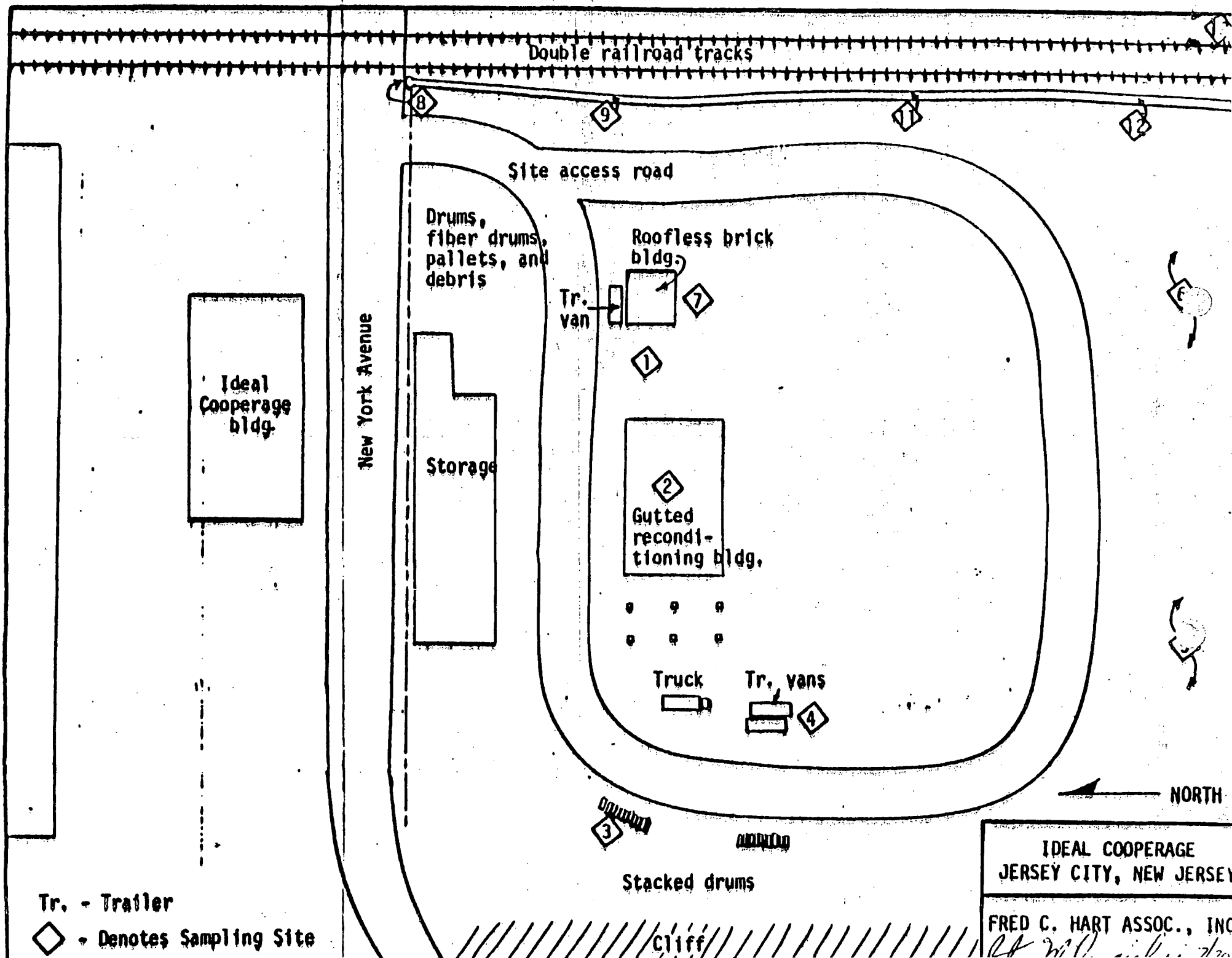
The quality of the stream along the railroad tracks had decreased drastically since our first inspection. Clean-appearing water was still discharging from the two small pipes near the northeast property corner, but within fifteen feet the water became turbid and light brown in color. Surface scum was heavy along with patches of oil and other floating materials. Downstream the stream's condition quickly became worse with thicker and more wide spread brown scum and black oil. At two points, oil seeping out of the bank on the Ideal Cooperage side into the stream were clearly evident. Also a yellow sludge material had settled along the stream bottom in several locations. This appeared to be paint or a paste. Further downstream near the Erie-Lackawanna overhead bridge the water became slightly clearer but the entire bottom showed heavy bacterial growths normally present in waters with heavy organic loadings. The stream continued another forty yards beyond the bridge except that there was no discernible outlet at that end. Instead, under the bridge between the railroad tracks and separated from the stream by approximately eight feet was a small depression through which water was clearly flowing. Upon closer examination of the stream bank in that area, a small section was observed where stream water was flowing through the rock subgrade towards the tracks and possibly to the small depression just noted. Beyond this point it was not possible to determine the final point of discharge of the stream. It seems that water drains under the tracks either through the subgrade or a drainage pipe.

Except for a chain link fence along New York Avenue the site is unsecure. In fact, during our sampling survey, two boys were seen crossing the stream, walking across the property and climbing up the cliff between the high and low areas of the site. As they crossed the property they were seen by Mr. Monck. He told them to leave the property immediately, whereupon they begin to shout back at Mr. Monck. Their attitude towards him was hostile and implied that perhaps the vandalism occurring to Mr. Monck's property could certainly have been caused by neighborhood youths.

Strong chemical odors permeated the entire area. Different odors were noted in different parts of the site. In fact as the two boys above were crossing the property they were heard to remark how bad the place smelled.

During the survey seven soil samples were taken from the lower, more heavily contaminated area of the site. All the soil samples were composited from at least three points in the same general vicinity. This was done in order to better characterize the site in terms of contaminants present. Five water samples were taken from the two pipes at the head of the stream, the stream itself, and the small depression between the double tracks under the bridge. Both soil and water samples were shipped to contract laboratories for organic and inorganic analysis. Sample site locations are shown on the attached sketch.

cc: Dr. Richard Spear
S&A Division, Edison


Double railroad tracks
Site access road
Drums, fiber drums, pallets, and debris
Roofless brick bldg.
Tr. van
Ideal Cooperage bldg.
New York Avenue
Storage
Gutted recondi-tioning bldg.
Truck
Tr. vans
NORTH
Stacked drums
Cliff
Tr. - Trailer
◇ - Denotes Sampling Site
IDEAL COOPERAGE
JERSEY CITY, NEW JERSEY
FRED C. HART ASSOC., INC

Location of Wells in Jersey City
Compiled by Amelia Jarvis, FIT
5/19/82 A1

Ryerson Steel - Kathy Connelly
1) Have talked about installing wells for company
2) Live in Jersey City and is interested in installing own private well

Ryerson Steel – Public H_2O
Baldwin Steel – "
Mallinckrodt – "
Car Wash – GE – "
Pasnak & Turkish – "

Jersey City Building Department 547-5055
Mr. Lupino, Chief Dwelling Inspector

City has following groundwater wells
1) Public Service
2) Inland Steel on Danforth
3) Joseph Cory Warehouse
4) Eastside Sewage
5) Westside Sewage
6) Golf range on 440 off Duncan – used for watering lawn

CAR WASHES ON
1) Danforth
2) Logan
3) Colden
4) Journal Square
5) Sip & Summit


RESIDENTIAL COMMUNITY
(UNDER DEVELOPMENT)
RESIDENTIAL COMMUNITY
(UNDER DEVELOPMENT)
LIBERTY
INDUSTRIAL
CONRAIL
PAVONIA STA.
78
1 & 9

Field Notes of P. Cangelosi

Ideal Coverage OVA
monitoring Survey
8/3/82 by GS + PC

Weather
wind 5-10 MPH From NE
Temp ~ 80°F, sunny, Fair

Background OVA 28-3.4

① Sustained 3ppm of solvent odor 4:10 PM
(similar to plastic manufacturing odor

② Sustained 3ppm reading, plastic
odor also noted

Notes + sketch by
Peter M Cangelosi
8/3/82